

EXECUTIVE SUMMARY

AIRCRAFT ACCIDENT INVESTIGATION MQ-1B, T/N 00-3066, KANDAHAR AIR BASE, AFGHANISTAN 4 September 2009

On 4 September 2009, at 2048 local Afghanistan time, a remotely piloted aircraft, an MQ-1B Predator, tail number 00-3066 ("RPA 00-3066" or "aircraft"), crashed into mountainous terrain in Afghanistan. The aircraft and one Hellfire missile were a total loss and damage to government property was estimated at \$4,960,000.00. The crash did not result in any injuries, damage, or harm to any individuals or private property.

After normal maintenance, pre-flight checks, and launch from the launch and recovery element (LRE) at Kandahar Airfield, Afghanistan, control of RPA 00-3066 was transferred to aircrew at the 3rd Special Operations Squadron (3 SOS) located at Cannon Air Force Base, New Mexico. Approximately 15 hours and 22 minutes after the 3 SOS assumed control, the RPA was flying 20,000 feet above mean sea level at 73 knots indicated air speed (KIAS) when it abruptly lost airspeed to 55 KIAS and started a rapid descent at roughly 1,300 feet per minute. The pilot, who reacted to assess the aircraft's loss in airspeed and altitude, turned the aircraft toward the nearest landing field. RPA 00-3066 continued its rapid descent and impacted the ground approximately 15 minutes after the first indicated malfunction.

The Accident Investigation Board President determined, by clear and convincing evidence, that the cause of the mishap was a mechanical failure of the Variable Pitch Propeller (VPP) servo which caused erroneous commands to the aircraft propeller, resulting in an abnormal position. The abnormal propeller position did not allow the proper amount of air into the engine and caused the aircraft to "bog down," resulting in the rapid loss of airspeed and altitude. The pilot tried to gain control of the aircraft by turning off the auto pilot hold modes and manually operating the throttle input. RPA 00-3066 did not respond to the pilot's commands and continued its rapid descent. Due to the uniqueness of the malfunction, the aircrew did not recognize that they should deploy the Hellfire missile to reduce the aircraft weight and potentially regain control of the aircraft. Immediately prior to ground impact, the pilot veered the aircraft to try to minimize damage. RPA 00-3066 impacted the ground in a remote mountainous region approximately 70 miles west of the intended airfield. The AIB President determined that the installation of the VPP servo was in accordance with Air Force technical orders. The VPP servo was not recovered, thus the Board President was unable to determine the exact cause of the servo malfunction.

Under 10 U.S.C. 2254(d), any opinion of the accident investigators as to the cause of, or the factors contributing to, the accident set forth in the accident investigation report may not be considered as evidence in any civil or criminal proceeding arising from the accident, nor may such information be considered an admission of liability of the United States or by any person referred to in those conclusions or statements.